■ GenAI for Developers – JavaScript Batch

■ Note

• JS ■■■ ■■■■■■ ■■
• ■■ ■■ ■■ 1 Full Stack TODO App JavaScript ■■■ ■■■■ ■■■■ ■■■■■, ■■■ ■■■■■ ■■ ■■■ ■■■■■

■ Course Overview

■■ course Large Language Models (LLMs) ■■ Generative AI ■■ deep dive ■■■
- Focus: Practical & Project-based learning
- ■■ Mathematics ■■■ ■■■■ ■■■■■■, ■■■■■ AI Tech Stack ■■ Applications/Products build ■■■■■■■

■ What You Will Learn

- Introduction to LLM & Generative AI – Fundamentals of LLMs
- AI Agents & Agentic Workflows – Intelligent, autonomous agents ■■■■■
- Building Chat Applications – LangChain ■■ ■■■ Chatbot ■■■■■
- Chat over Large Documents – Qdrant, PGVector, Pinecone ■■ use
- Retrieval-Augmented Generation (RAG) – Real-time info retrieval
- Context-Aware AI Applications – Contextual intelligent systems
- Memory-Aware AI Agents – Qdrant DB ■■ Neo4j Graph ■■ ■■■■■
- Document-to-Graph & Embeddings – Data ■■ Graph-based ■■■■■
- Multi-Modal LLM Applications – Text, Image, Audio integration
- Security & Guardrails – Self-hosted models (Llama-3, Gemma)
- AI Agent Orchestration with LangGraph
- Checkpointing in LangGraph – Fault tolerance pipelines
- Human-in-the-Loop Interruptions – Human oversight
- Tool Binding & API Calling – AI Agents → External Tools
- Autonomous vs Controlled Workflows
- MCP Servers – AI microservices deploy ■■■■
- Guardrails for AI Models – Prompt filtering, PII detection
- Model Fine-Tuning – Custom LLM training
- LLM as a Judge Technique – AI ■■ AI ■■ evaluate ■■■■
- Deployment on AWS – Scalable Cloud Hosting
- Cypher Query Context Retrieval – Neo4j + LLM Integration

■■ Tech Stack

- Programming: JavaScript / TypeScript
- LLM Models: OpenAI, DeepSeek, Claude
- Frameworks: LangChain.js, LangGraph.js, LangSmith
- Tracing & Monitoring: Langfuse (Docker)
- Memory & Vector Stores: Qdrant DB, Pinecone, Vector Embeddings
- Infrastructure: MCP Server, Neo4j Graph DB, AWS

■ Learning Outcomes

- Frameworks → LangChain, LangGraph ■■■ mastery
- Databases → Qdrant, Neo4j, Pinecone use ■■■■
- Models → OpenAI, Gemini, Llama-3, Gemma
- Infrastructure → AWS, Docker, LangSmith, Langfuse

■ Hands-On Projects

- AI Persona Maker – Chatbot (talks like Piyush Garg & Hitesh)
- AI-Powered CLI Cursor – CLI based intelligent coding assistant
- Voice Powered AI Girlfriend – Voice-based chatbot (for demo use)

- Voice-Powered Vibe Coder – Example: “Hey AI, build a TODO App in React”
- AI-Powered Website Bot – AI-driven website content interaction